## REMARKS/ARGUMENTS

Claims 1 - 24, 30 - 32, 38 - 55, and 65 - 75 are pending in the application.

Claims 25 - 29, 33 - 37 and 56 - 64, have been cancelled without prejudice.

Claims 2 - 24, 30 - 32, 38 - 55, 65 and 68 - 75 have been allowed.

Claims 1, 66 and 67 stand rejected.

In the office action, claim 1 was rejected under 35 U.S.C. 103(a) as unpatentable over Noro (US 5,297,211) in view of Lamb (US 6,448,348). The Office Action Summary indicated that claims 66 and 67 also were rejected, but the office action did not give any specific grounds. The absence of such grounds is believed to be moot, however, since the rejection of claim 1 is respectfully traversed on the grounds that the examiner has failed to make a proper *prima facie* case of obviousness. (*In re* Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); *In re* Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re* Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)).

The present invention is concerned with multi-zone audio systems or entertainment centres comprising an audio distribution unit for driving several sets of loudspeakers in different zones, such as different rooms of a house. Such systems are known which have a remote control unit in each zone for controlling the central audio distribution unit. As stated in applicant's specification, in the passage extending from page 1, line 27 to page 2, line 3:

> A disadvantage of such systems is that each keypad unit is connected to the audio distribution unit by a multi-conductor cable which comprises some conductors for exchanging control signals between the remote keypad unit and the audio distribution unit, and others for supplying power from the audio distribution unit to the remote keypad unit. It is expensive to provide such multi-conductor cabling for every keypad, and such expense is especially unacceptable when adding remote control to an existing multi-zone loudspeaker system, which usually would require installation of *multi-conductor cables in addition to existing two-conductor loudspeaker cables*. (Emphasis added)

With such an arrangement, there would be four conductors (two wires to each loudspeaker) for conveying audio signals to the two loudspeakers, plus a number of other conductors for conveying power and control signals to the remote control. As explained, this is not acceptable, especially when "retro-fitting" remote control to an existing multi-zone loudspeaker system.

The present inventor addressed this inadequacy by conveying power and control signals for the remote control, and the audio signals to the two loudspeakers, using only four conductors. This is reflected in the wording of claim 1 of record which, with parsing and highlighting (italics) to facilitate comprehension, reads as follows:

1. Apparatus comprising an audio distribution unit (10) having

means (11) for providing audio signals from audio sources and output ports (12A...12D) for supplying sets of audio transducers,

each said set comprising at least a first audio transducer (14A(L)) and a second audio transducer (14A(R)) and having associated therewith at least one remote unit (34A) for controlling the audio distribution unit by means of digital data signals,

the first and second audio transducers (14A(L),14A(R)) and the remote unit (34A) being connected to the audio distribution unit (10) by a set of four conductors,

the apparatus further comprising

means (22A...22D, 44, 76, 80-96) for

supplying *audio signals to* each of the *audio transducers* (14A(L),14A(R)) by way of a respective pair of said *four conductors* and

transferring *power and said digital data signals* between said audio distribution unit (10) *and said remote unit* (34A) by way of at least two *of said four conductors*. (Emphasis added)

Thus, there are four conductors connecting the two audio transducers (loudspeakers) and the remote control to the audio distribution unit. In the present applicant's drawings, the four conductors supplying zone A are numbered 26A(L1), 26A(L2), 26A(R1) and 26A(R2); and the four conductors supplying zone D are numbered 26D(L1), 26D(L2), 26D(R1) and 26DA(R2). These conductors may, of course, be the existing four speaker wires of an existing multi-zone loudspeaker system having the usual two loudspeaker cables, one to each pair of loudspeakers.

These same four conductors, and only these four conductors, convey four components, i.e., (i) the LH audio signal to the LH loudspeaker, (ii) the RH audio signal to the RH loudspeaker, (iii) power for the remote unit and (iv) digital data to/from the remote unit.

On page 3 of the office action, it is stated that "it is inherent that audio signals from ports 220 and 222 to speakers 116 and 118 will contain power in order to drive the loudspeaker". Clearly, the examiner overlooked the fact that, in claim 1, the specified "power" is transmitted to the remote unit. A claim must be construed in the context of the specification (See, for example, Phillips v. AWH, CAFC *en banc*, 2005). When the present applicant's claim 1 is construed in context, it is clear that the specified power is not that which is inherent in the audio signals.

Turning now to the first reference, Noro does not disclose all four of the components identified above, namely audio signals to the loudspeakers, and control signals and power to the remote control, being conveyed by way of only four conductors. In the arrangement shown in Noro's Figure 1, the central receiver 110 is connected to loudspeakers 116 and 118 in zone (room) 108 by a first set of four conductors, i.e., two conductor pairs 119 and 121. In addition, it is connected to the remote control receiver 120 by four more conductors 115 which convey control signals and power (from terminals 151 (+B) and 154 (G) to the remote control unit's receiver 120.

Figure 6, to which the examiner referred in the office action, shows loudspeaker pairs in four remote zones 208, 210 and 212 connected to central receiver 110, each by way of a respective one

of four re-transmission units 112 combined into a re-transmission section 206. Each re-transmission section 112 "is constructed in the same manner as the re-transmission unit 112 of FIG. 1." (Col. 11, lines 35-37). Also, "Each of the re-transmission units 112 is connected to a corresponding receiving unit 120 of each room through a cable 115" (Col. 11, lines 41-43). The two loudspeakers 116 and 118 in each room "are connected commonly to loudspeaker terminals 200 and 222 of the receiver 120 (*sic*) through loudspeaker cables 119 (right channel) and 121 (left channel)." (It is noted that terminals 220 and 222 are on the central receiver 110; not the remote receiver 120.)

Thus, Noro has eight conductors connecting each zone to the central location. Of these eight conductors, a first set of four conductors convey audio signals to the loudspeakers 116 and 118 and a second set of four conductors convey power and control signals to the remote. This is, of course, what the present applicant discussed as prior art in the passage extending from page 1, line 27 to page 2, line 3 of his specification, as cited above.

Since the examiner has erred in construing claim 1, it follows that his rejection of claim 1 as unpatentable over Noro in view of Lamb *et al.* is without merit.

Notwithstanding that, the rejection is without merit for other reasons. Thus, the Lamb reference is not analogous art. Lamb *et al.* disclose one particular way of transmitting computer data signals, telephone data signals and power to a telephone set and computer via a telephone line. A person seeking a solution to the problems associated with multi-conductor cables in a multi-zone audio system would not be motivated to look to the telephone industry for guidance. (*In re* Deminski, 796 F.2d 436, 442 (Fed. Cir. 1986); *In re* Wood, 599 F.2d 1032, 1036 (CCPA 1979).

In addition, contrary to the examiner's assertion, a person skilled in multi-zone audio systems would not be motivated to combine Lamb *et al.*'s power transfer apparatus with Noro's system for supplying loudspeakers "for space and cost savings". The Court of Appeals for the Federal Circuit has ruled that, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant (*In re* Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Attention is directed to Figure 1 of Lamb *et al*'s disclosure, which shows a "power and data coupler 110" attached to one end of cable 160 and a "power and data decoupler 170" attached to the other end. The coupler 160 and decoupler 170 each must handle computer data, telephone data and power, so they are expensive devices. It would be necessary to have two couplers and two decouplers, i.e., one pair for the RH loudspeaker and the other pair for the LH loudspeaker. The cost would be prohibitive. In addition, the couplers and decouplers would have to be able to handle the audio signals, with frequencies as low as 20 Hz., so they would be very large, and hence costly, and unsuitable for inclusion in the audio distribution unit or the remote unit.

Last, but not least, even if the skilled addressee were to make the combination proposed by the examiner, based upon the examiner's incorrect interpretation of claim 1, the end result would be that the digital data and power signals would be received by the loudspeakers (since the power is the

power "inherent" in the audio signals). Consequently, the remote unit would be without power. Clearly, the combination would not work.

There is no disclosure or suggestion in the disclosures by Noro and Lamb *et al.*, whether taken individually or in combination, which would motivate the skilled addressee to omit half of the eight conductors used by Noro's multi-zone entertainment system and use only the remaining four conductors to convey the two audio signals to the loudspeakers and the power and data to the remote unit.

Accordingly, the rejection of claim 1 as obvious over Noro in view of Lamb *et al.* is untenable and should be withdrawn.

As indicated above, claims 66 and 67 were shown as rejected in the cover sheet but no grounds of rejection were cited in the body of the office action. Regarding claim 66, as explained above, the examiner erred in construing claim 1 and reading it onto Noro. Since claim 66 is dependent upon claim 1, it includes all of its limitations. It follows that the rejection of claim 66 as unpatentable is untenable for the same reasons as claim 1, and the rejection should be withdrawn.

Claim 67 also is dependent upon claim 1 and so includes all of its limitations. Consequently, the rejection of claim 67 fails for the same reasons and should be withdrawn.

In view of the foregoing, it is submitted that all extant claims are patentable and the applicant respectfully requests withdrawal of the rejection of claims 1, 66 and 67 and early and favourable reconsideration and allowance of the application.

With a view to expediting allowance, the examiner is invited to call the undersigned at (613) 254 9111 if he has any further concerns.



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